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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/759,747

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Johan D. Overby

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02/17/2006

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EXAMINER

WHITTINGTON, KENNETH

ART UNIT

PAPER NUMBER

2862

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/759,747

Applicant(s)

OVERBY ET AL.

Examiner

Kenneth J. Whittington

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 1-17 and 25-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Bot Ledynh  
Primary Examiner

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/25/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 2862

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election of Group II, claims 18-24 in the reply filed on January 6, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

***Specification***

Applicant is reminded of the proper content of an abstract of the disclosure. The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

The abstract of the disclosure is objected to because the last six lines refer to the purported merits of the invention. Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 20-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point

Art Unit: 2862

out and distinctly claim the subject matter which applicant regards as the invention. Claim 20 recites a situation of determining one active marker, determining a marker transmit signal and then summing the marker transmit signals. It is  
5 unclear how a situation having one marker transmit signal can be "summed" to create a zero delay phase as recited in the claim. In the specification at paragraphs 063-064, the apparatus creates this zero delay phase between two signals.

Claims 20-22 are also rejected under 35 U.S.C. 112, second  
10 paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the delay phase being zero at time zero of the transmit burst or the tail end of the transmit burst. It is unclear from the claims in what time  
15 period or how the delay phase is zeroed. In the specification at paragraphs 063-064, Applicant noted an important constraint to the system is to create a delay phase for the group of marker transmit signals such that the delay phase is zero at time zero or at the tail end of the transmit burst.

20 It is noted that amending these claims to require "a plurality of active markers" and language stating "the delay phase is substantially zero" at a time zero or the tail end of the burst would overcome these rejection.

Art Unit: 2862

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 18 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Wright et al. (US 6,977,504), hereinafter Wright. Regarding these claims, Wright discloses a method for locating one or more markers comprising:

generating a series of electromagnetic pulses (See Wright col. 8, line 61 to col. 9, line 16 and col. 10, line 49 to col. 11, line 15);

receiving signals as a function of time between application of the pulses (See col. 9, lines 4-27);

averaging the signals over a predetermined number of pulses to obtain an average decay signal (See col. 9, lines 35-47);

Art Unit: 2862

initially determining a frequency, field strength, and phase for responses from the one or more markers (See col. 11, lines 16-26);

5 accurately determining the frequency, field strength, and phase by successive elimination of a contribution from each of the one or more markers and refining the electromagnetic pulses in order to provide resonant frequencies for each of the one or more markers (See col. 11, lines 27-52 and also col. 11, line 53 to col. 12, line 57);

10 wherein generating a series of electromagnetic pulses includes: generating a transmit signal with resonant frequencies from at least one marker and applying the transmit signal to an electromagnetic generator (See col. 11, lines 44-52).

15 ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

20 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be  
25 negatived by the manner in which the invention was made.

Art Unit: 2862

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 5       1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
- 10     4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 18, 19, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodgers et al. (US 6,362,737), hereinafter Rodgers, in view of McEwan et al. (US 5,512,834), hereinafter McEwan. Regarding these claims, Rodgers teaches an object identification system comprising:

generating a series of electromagnetic pulses (See Rodgers col. 11, line 45 to col. 14, line 3);

20       receiving signals as a function of time between application of the pulses and to obtain an average decay signal (See col. 14, line 17 to col. 15, line 12);

initially determining a frequency, field strength, and phase for responses from the one or more markers, accurately

25       determining the frequency, field strength, and phase by successive elimination of a contribution from each of the one or more markers and refining the electromagnetic pulses in order to

Art Unit: 2862

provide resonant frequencies for each of the one or more markers  
(See col. 17, line 1 to col. 18, line 26);

wherein generating a series of electromagnetic pulses  
includes: generating a transmit signal with resonant frequencies  
5 from at least one marker and applying the transmit signal to an  
electromagnetic generator (See same portions or paragraphs);

wherein the determining a frequency, field strength, and  
phase includes performing a fast Fourier transform of the  
average decay signal (See col. 14, line 57 to col. 15, line 12)  
10 and obtaining initial determinations of the frequency, field  
strength, and phase of at least one marker from parameters  
determined in the fast Fourier transform (See col. 16, lines 1-5  
and col. 17, lines 1-6); and

wherein determining the frequency, field strength, and  
15 phase more accurately includes: determining a dominant marker  
from the initial determinations; calculating a response from the  
dominant marker; removing the response from the dominant marker  
from the average decay signal; and determining the frequency,  
field strength, and phase of at least one marker from the  
20 average decay signal with the response from the dominant marker  
removed (See col. 17, line 1 to col. 18, line 4).

However, while Rodgers mentions averaging signals by the  
processor and sampling the received signal (See col. 42, lines



Art Unit: 2862

34-39 and col. 14, lines 44-56), Rodgers does not teach averaging the signals. McEwan teaches a hidden object detector that averages 10,000 received signal prior to subsequent processing (See McEwan col. 6, lines 19-33). It would have been  
5 obvious at the time the invention was made to perform the sampling and averaging taught by McEwan in the apparatus of Rodgers. One having ordinary skill in the art would have been motivated to do so to reduce the random noise in the sampled signal and simplify the circuit (See same paragraphs of McEwan).

10

#### ***Allowable Subject Matter***

Claims 20-22 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the  
15 base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not show a delay phase adjustment as recited in the claims.

20

#### ***Conclusion***

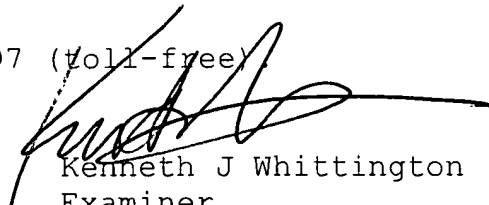
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited prior art discloses and teaches varying designs of object

Art Unit: 2862

interrogation systems and locators. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth J. Whittington whose telephone number is (571) 272-2264. The examiner can normally be reached on Monday-Friday, 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Kenneth J Whittington  
Examiner  
Art Unit 2862

kjw